AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently Amended) A method for ~~the production of metal salts~~ producing metal salts consisting of a cationic metal and an anionic group, wherein ~~a~~ the cationic metal is any metal cation, and wherein ~~an~~ the anionic group is selected from phosphates, borates, silicates, sulfates, carbonates, hydroxides, fluorides and mixtures thereof, and

wherein said method comprises

a) forming a mixture of at least one metal source of the cationic metal which ~~that~~ is a metal carboxylate with a mean carbon number ~~value~~ per carboxylate group of at least 3 and at least one anion source of the anionic group into droplets, and

b) oxidizing said droplets in a high temperature environment.

2. (Currently Amended) The method of claim 1 wherein the mean carbon number ~~value~~ per carboxylate group is ~~at least 4~~ between 5 and 8.

3. (Previously Presented) The method of claim 1 wherein the metal carboxylate and the anion source are oxidized in a flame.

4. (Canceled)

5. (Currently Amended) The method of claim ~~4~~ 1, wherein ~~the~~ viscosity of the mixture in step a) is obtained by heating and/or ~~by providing a mix of the at least one metal carboxylate, the at least one anion source and~~ by adding at least one viscosity reducing solvent to the mixture.

6. (Currently Amended) The method of claim ~~3~~ 5 wherein the viscosity reducing solvent comprises up to 100% acid(s).

7. (Original) The method of claim 6 wherein the solvent comprises no acid.

8. (Previously Presented) The method of claim 5, wherein the solvent comprises at least one low molecular weight and/or low viscosity apolar solvent.

9. (Previously Presented) The method of claim 1, wherein the metal carboxylate is selected from the group consisting of C1 to C18 carboxylates and mixtures thereof.

10. (Previously Presented) The method of claim 1, wherein the sum of cationic metals is selected from Group I to IV metals including 3d transition metals and lanthanoides and wherein at least 80 atom % of all metals are calcium.

11. (Previously Presented) The method of claim 1, wherein the sum of cationic metals comprises, calcium and at least one further metal selected, from the group consisting of magnesium, zinc, strontium, barium, rare earth metals and mixtures of two or more of the above-mentioned

above-mentioned metals.

12. (Previously Presented) The method of claim 1, wherein the sum of anionic groups comprises anionic groups selected from the group consisting of phosphates, hydroxides, carbonates, fluorides and mixtures thereof in amounts of at least 90 mol-% of the theoretically calculated necessary amount of anions if electron neutrality in the salt is assumed.

13. (Previously Presented) The method of claim 12 wherein the sum of anionic groups furthermore comprises anionic groups selected from the group consisting of silicates, sulfates and mixtures thereof.

14. (Previously Presented) The method of claim 1 wherein the anion source comprises

a phosphate source selected from inorganic phosphorous compounds and/or organophosphorous compounds soluble in solvents or solvent mixtures having an enthalpy of at least 13 kJ/g, and/or

a fluoride source being a fluoride derivative of an organic compound, said fluoride derivative being soluble in the above defined solvent or solvent mixture, and/or

a silicate source selected from organic silicates and/or organosilicon compounds soluble in the above defined solvent or solvent: mixture,

a sulfate source selected from organic sulfur containing compounds and/or sulfuric acid said sulfate source being soluble in the above, defined solvent or solvent mixture, and/or

a carbonate source selected from any organic carbon source.

15. (Previously Presented) The method of claim 1 wherein the metal salt is selected from the group consisting of amorphous tricalciumphosphate, alphatricalciumphosphate, beta-tricalciumphosphate, apatites and mixtures thereof.

16. (Currently Amended) The method of claim 15, wherein the apatite is selected from ~~$Ca_{10}(PO_4)_6(OH)2x^F2y(CO_3)_z$~~ $Ca_{10}(PO_4)_6(OH)_{2x}F_{2y}(CO_3)_z$ whereby x, y and z each range from 0 to 1 and the sum of x+y+z is 1.

17. (Previously Presented) The method of claim 15, wherein the compound formed is an at least 96% pure product selected from amorphous tricalciumphosphate, alpha-tricalciumphosphate or beta-tricalciumphosphate or hydroxyapatite or fluorapatite or hydroxyfluorapatite.

18. (Previously Presented) The method of claim 1 wherein the flame oxidation is performed in a spray burner.

19. (Previously Presented) The method of claim 1 wherein the oxidation is performed at a temperature of at least 600°C.

20. (Previously Presented) The method of claim 1 wherein the metal carboxylate is prepared starting from the group consisting of a metal oxide, a metal hydroxide, a metal carbonate, and a metal halide.

21. (Previously Presented) The method of claim 1, wherein the enthalpy of the metal carboxylate or the metal carboxylate comprising solution is at least 13 kJ/g.

22. (Previously Presented) The method of claim 1, wherein the solution comprises at least one metal source in an amount corresponding to at least 0.15 moles metal(s) per liter, and at least one anion source in an amount corresponding to at least 0.05 moles anionic group(s) per liter.

23. (Previously Presented) The method of claim 1, wherein the as produced metal salt is reduced in carbonate content by a heat treatment.

24. (Currently Amended) The method of claim 1 wherein the metal salt is ~~produced in a flame with insufficient oxygen for full combustion or conversion of the reactants resulting in the formation of~~ a substoichiometric salts and

wherein the flame contains insufficient oxygen for full combustion or conversion of the reactants.

25. (Withdrawn) A metal salt obtainable by the method of claim 1.

26. (Withdrawn) A metal salt according to claim 25, that does not release more than 7.5 wt % water upon heating to 900°C at a heating rate of 10°C per minute.

27. (Withdrawn) A metal salt according to claim 25, that releases more than 90 wt % of all water upon heating to 500°C at a heating rate of 10°C per minute.

28. (Withdrawn) A metal salt according to claim 25 that has percolating phases.

29. (Withdrawn) The metal salt of claim 25 that is a biomaterial.

30. (Withdrawn) The metal salt according to claim 25, which is a tricalciumphospate.

31. (Withdrawn) The metal salt according to claim 25, which is an alpha-tricalciumphospate with a specific surface area (measured by nitrogen adsorption at 196°C according to the BET-method) of more than 3 m^2/g, or a beta-tricalciumphospate with a specific surface area (measured by nitrogen adsorption at 196°C according to the BET-method) of more than 1 m^2/g.

32. (Withdrawn) Use of a metal salt obtainable by the method of claim 1 in medical applications.